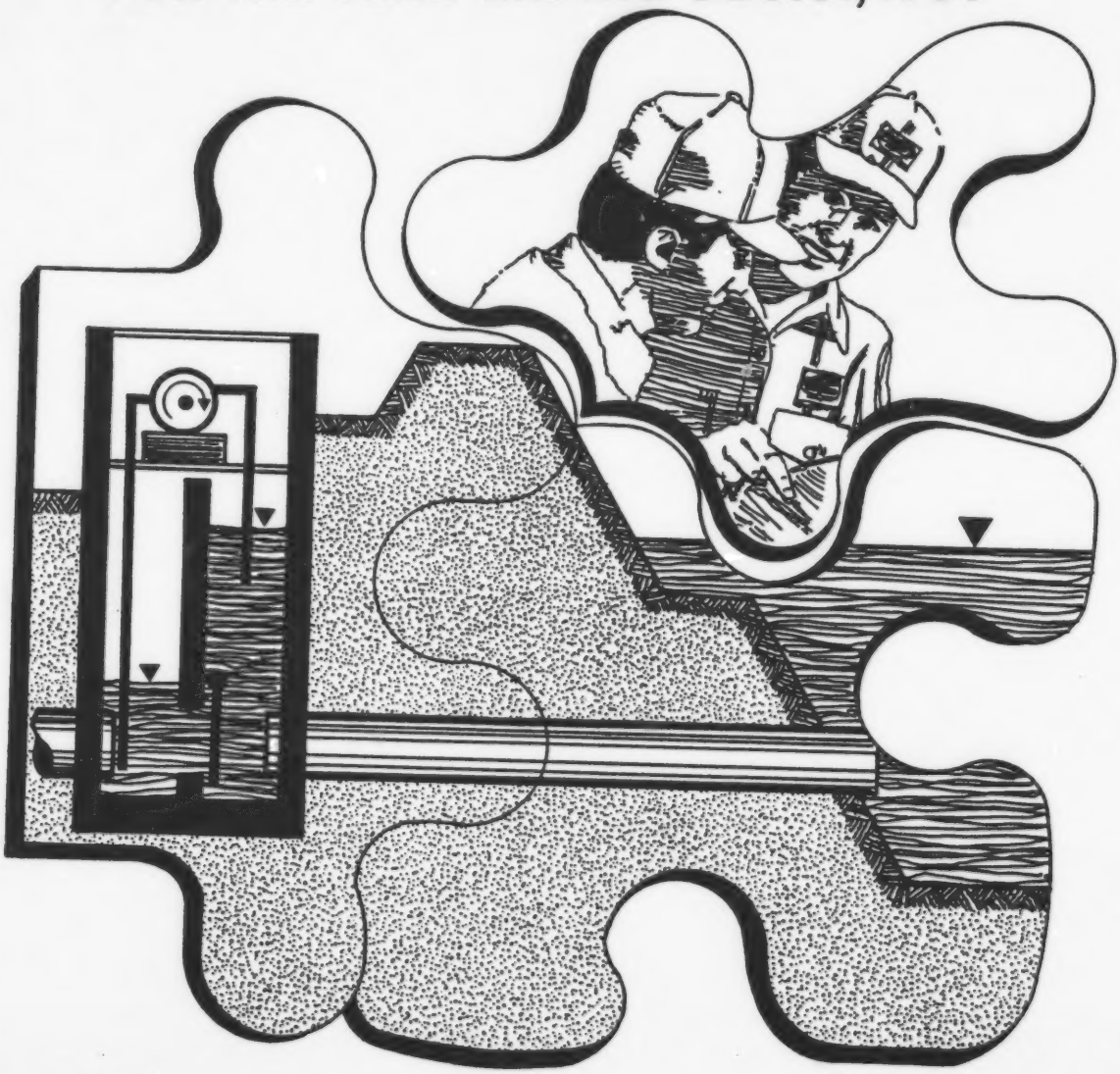
THE ANNUAL REPORT

OF THE

DYKING COMMISSIONER

•FOR THE YEAR ENDING DEC.31,1988



SUBMITTED TO:

The Hon. JACK PENNER
Minister
Department of Natural Resources

SUBMITTED BY:

F. PENNER P. Eng.
Dyking Commissioner

Manitoba

89-05914/

Natural Resources

Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

April 19, 1989

File: 11.1.5

The Honourable Jack Penner
Minister of Natural Resources
Department of Natural Resources
Room 314, Legislative Building
450 Broadway Avenue
Winnipeg, Manitoba
R3C 0V8

Dear Sir:

I have the privilege to submit, herewith, the Annual Report of the Dyking Commissioner as required under Section 15 of The Dyking Authority Act.

This report covers the appraisal of the Greater Winnipeg Dyking System and ancillary Pumping Stations for the 1988 calendar year, to determine its adequacy to provide flood protection for the City of Winnipeg.

Please note that the Act does not require this report to be tabled in the Legislature.

Yours truly

F. Penner, P. Eng.
Dyking Commissioner

Enclosure

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1 Acknowledgements

Evaluation of the adequacy of the dyking system is based mainly on reports provided by the staff of the City of Winnipeg and the University of Manitoba. Their co-operation in providing annual reports and technical advice is gratefully acknowledged.

In recognition of the crucial role people play in flood defense, the report cover has been revised. To the dyke and pumping station appearing on earlier covers, a third element - people - has been added.

2 The Dyking Authority Act of 1952

The Dyking Authority Act D110, passed in 1952, was intended to ensure that the dykes and pumping stations constructed subsequent to the 1950 flood were maintained in a state of readiness to combat future floods. In fact, the full title of the Act is *An Act to Provide for the Maintenance of Dykes and Pumping Stations in Greater Winnipeg.*

While authority and control over dykes and pumping stations was vested with the city or rural municipality in which they were situated, provision was made for the appointment of a Dyking Commissioner with powers to inspect dykes and pumping stations and to order work to be undertaken to maintain an integrated system of flood defences as well as to establish the location of the line of defence.

The Dyking Commissioner was required to "before the first day of April in each year, make to the Minister a report on the administration and carrying out of the provisions of this Act during the year ending on the thirty-first day of December next preceding the making of the report, and on the condition of the dykes, pumping stations, and pumps, and their sufficiency for the purposes for which they were constructed or installed".

3 Changes Since 1952

Several major changes have taken place since the passing of the Act in 1952.

1. Major flood control projects affecting the City of Winnipeg namely the Red River Floodway, Portage Diversion and Shellmouth Dam projects have been completed.

2. Urban development has taken place beyond the lines of flood defence established earlier.

3. The five cities and two rural municipalities subject to the Act have been replaced by a single city.

4. The Canada-Manitoba Flood Damage Reduction Agreement has produced an Interim Flood Risk Map designating Flood Risk Areas and Floodways in the City of Winnipeg and has defined certain criteria for developments dictated by flood levels.

4 Current Issues

These changes and other considerations have given rise to the following issues:

1. The flood defence lines as currently established need revision to recognize the reality of the Floodway and recent urban development.

2. The Dyking Authority Act needs to be updated in two general areas:

   - Its area of jurisdiction needs to be clarified. Specific issues are its application in the "additional zone", to the University of Manitoba, to dykes forming part of the Floodway and to provincial highways which may form part of the line of defense.

   - The standards for primary dykes need to be specified preferably by regulation under the Act.

3. In his 1985 report the Dyking Commissioner noted the last major flood fighting operation in the City occurred in 1966 and recommended a one or two day "extreme flood workshop" for staff from the City and Provincial Government Departments to ensure an awareness of the probability and nature of an extreme flood.

4. A key dyke closure in the case of an extreme flood is the dyke crossing PTH 75 at the Floodway Control Structure under the jurisdiction of the Department of Natural Resources. The Dyking Commissioner is of the opinion that the size of the temporary closure should be reduced by placing permanent fill adjacent to the closure section.

5. While the Dyking Commissioner considers the above issues to be important and to require action, he does not consider them of greater importance than the ongoing routine maintenance of pumping stations and gate chambers.

5 Current Action On Issues

The current status of action to resolve these issues is as follows:

1. The City is reviewing the Primary Dyking System for redesignations and possible extensions. Surveys of several redesignation areas and possible extensions have been completed. Plans are being prepared and will be submitted to the Dyking Commissioner for approval. A number of preliminary proposals have been reviewed with the Commissioner as noted in the City of Winnipeg report in Appendix C. However the pace of this work needs to be increased.

   The City is working closely with the Forks Renewal Corporation to ensure that flood protection in the area is maintained and enhanced where possible.

   The City has initiated a project to prepare updated maps of the primary dykes.

2. The current review of the City of Winnipeg Act provides an opportunity to update the Dyking Authority Act. Discussions are underway between the DNR and Urban Affairs.

3. At its meeting of December 22, 1988, the board of Commissioners adopted a proposal by the Commissioner of Works and Operations that an exercise be held in 1989 to test the City of Winnipeg Peacetime Emergency Plan in response to a simulated Red River flood.

6 Inspection of Facilities

The City and the University have ongoing inspection and maintenance programs.

I have been impressed with the degree of care and the associated costs which the City applies to its flood protection facility.

7 Reports by the City of Winnipeg and the University of Manitoba

A questionnaire was sent to the City and to the University requesting information for the purpose of preparing this report. A copy of the request and questionnaire is included in Appendix B. The replies to the questionnaire, included in Appendix C, indicate that inspections were carried out, and that necessary maintenance work was carried out. All facilities appear to be in satisfactory condition.

8 Operation of Pumping Stations and Gates

During the low 1988 spring flows, it was only necessary to activate one permanent pumping station. Details are included in the City report in Appendix C.

The City maintains and regularly updates a Flood Control Manual. Revisions were made in 1988. The University maintains a similar manual.

It is ironic that the design and operation of the flood control system has achieved such a level of excellence that the public is largely unaware and hence unappreciative of this activity.

9 Additional Works Constructed

Repairs and improvements were made to a number of waste water outfalls as noted in the City report in Appendix C.

10 Recommendations

It is recommended that:

1. City of Winnipeg complete their study of the revision and extension of the line of flood defence as soon as possible.

2. The City and the provincial Department of Natural Resources continue their efforts to test their flood fighting plans.

3. The Dyking Authority Act be revised as appropriate.

4. The Department of Natural Resources consider improving the dyke closure section at PTH 75 and the Floodway Control Structure.

11 Appendix A

City of Winnipeg Map - Showing District Boundaries,
Flood Defence Lines and Pumping Station Locations.

NORTH KILDONAN

EAST KILDONAN

WINNIPEG

ST BONIFACE

ST. VITAL

JAMES AVE PUMPING STATION

JAMES

WINNIPEG

TUXEDO

FORT GARRY

4

3

5

9

7

2

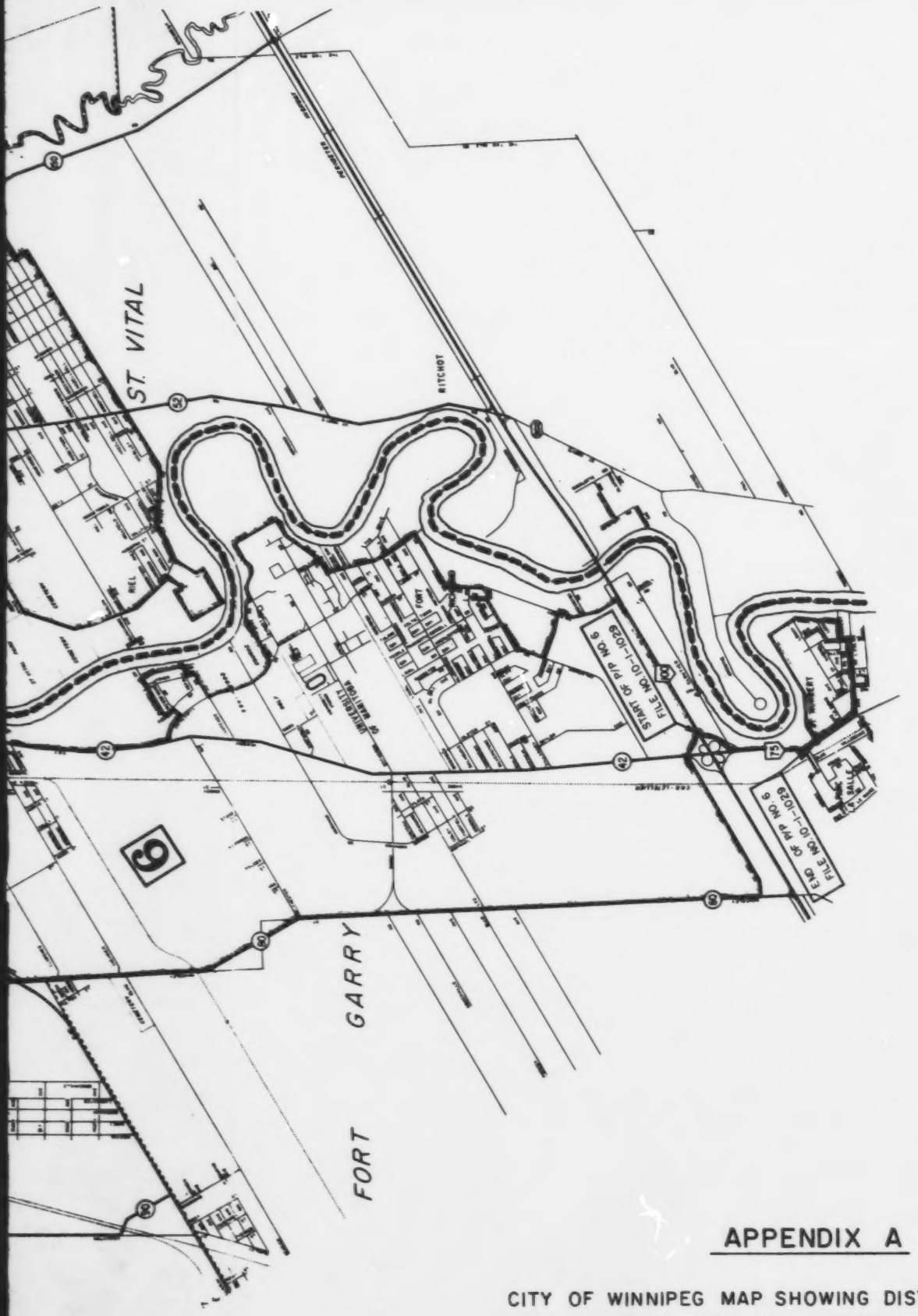
10

END OF PIPE NO 4

START OF PIPE NO 3

END OF PIPE NO 10-1-1023

START OF PIPE NO 10-1-1023



APPENDIX A

CITY OF WINNIPEG MAP SHOWING DISTRICT BOUNDARIES,
FLOOD DEFENCE LINES AND PUMPING STATION LOCATIONS.

FILE NO. 10-1-1039 C

12 Appendix B

Copy of Questionnaire Sent To:

The City of Winnipeg
The University of Manitoba

Manitoba

Natural Resources

Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

January 4, 1989

FILE: 11.1.5

W.D. Carroll
Director of Waterworks, Waste
and Disposal Department
1500 Plessis Road
Box 178 Transcona P.O.
Winnipeg, Manitoba
R3C 2Z9

Dear Sir:

RE: DYKING COMMISSIONER'S 1988 ANNUAL REPORT.

The Dyking Authority Act, Section 15, requires that:

> "The commissioner shall, before the first day of April in each year, make to the minister a report on the administration and carrying out of the provisions of this Act during the year ending on the thirty-first day of December next preceding the making of the report, and on the condition of the dykes, pumping stations, and pumps, and their sufficiency for the purposes for which they were constructed or installed."

To assist me in making this report I request that you supply me with a report on the dyking and pumping stations under your jurisdiction by 1989 02 28. For convenience, I am including a standard questionnaire similar to that used in previous years.

Please report also on the following item:

1. Your schedule to finalize the outstanding revisions to the line of flood defense.

Yours truly,

ORIGINAL SIGNED BY:

F. PENNER

F. Penner, P. Eng.
Dyking Commissioner.

FP/dlm

Attachment

Manitoba

Natural Resources

Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

January 4, 1989

FILE: 11.1.5

Mr. W.R. Wall
Associate Vice-President
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

Dear Sir:

RE: DYKING COMMISSIONER'S 1988 ANNUAL REPORT

The Dyking Authority Act, Section 15, requires that:

> "The commissioner shall, before the first day of April in each year, make to the minister a report on the administration and carrying out of the provisions of this Act during the year ending on the thirty-first day of December next preceding the making of the report, and on the condition of the dykes, pumping stations, and pumps, and their sufficiency for the purposes for which they were constructed or installed."

To assist me in making this report I request that you supply me with a report on the dyking system and pumping stations under your jurisdiction by 1989 02 28. For convenience, I am including a standard questionnaire similar to that used in previous years.

Please include a report on the performance of the bank stabilization work adjacent to the Earth Sciences Building. Is the instrumentation at this site being monitored? What are the results?

Yours truly,

ORIGINAL SIGNED BY:

F. PENNER

F. Penner, P. Eng.
Dyking Commissioner

FP/dlm

Attachment

QUESTIONNAIRE FOR THE ANNUAL REPORT ON THE PRIMARY DYKING SYSTEM WITHIN THE CITY OF WINNIPEG

1. For The Reporting Year

Please provide information concerning:

a) Difficulties and problems encountered,

b) Maintenance and repairs carried out,

c) New Sewer Outfall Gate Structures constructed,

d) Improvements and modifications carried out.

2. Proposed Plans For Future

Please provide information concerning proposed new structures, modifications to existing structures, and proposed improvements or additions to the dyking system. Also note any evaluation studies completed or underway in connection with the "Primary Dyking System".

Further, in view of the apparent and river bank stability problems, please provide information in regard to:

a) Evaluation of river bank stability in critical areas.

b) Monitoring of erosion of river banks in critical areas.

c) Any remedial works undertaken or completed in the reporting year.

3. Availability And Location Of Proposed Borrow Pits

Indicate changes if any in availability and location of proposed borrow pits in the reporting year.

13 Appendix C

Replies to the Questionnaire in Appendix B

From
The City of Winnipeg
And
The University of Manitoba

THE CITY OF WINNIPEG

WATERWORKS, WASTE, AND DISPOSAL DEPARTMENT

1500 PLESSIS ROAD • BOX 178 TRANSCONA P.O. WINNIPEG • MANITOBA • R2C 2Z9

IN REPLY PLEASE REFER TO

FAX: (204) 956-4502

1989 04 11

Manitoba Department of Natural Resources
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

Attention: Mr. F. Penner, P.Eng.,
Dyking Commissioner

Dear Sir:

RE: Dyking Commissioner's 1988 Annual Report
Our File No. RF-1

In reply to your letter of January 4, 1989, please find attached the 1988 Flood Control Reports of the Waterworks, Waste and Disposal Department, the Operations Department, and the Streets and Transportation Department, with regard to Flood Pumping Stations and the Dyking System within the City of Winnipeg.

Yours truly,

W.D. Carroll,
Director

PEAL/ea

Attachments

WINNIPEG
..where the New West begins

THE CITY OF WINNIPEG

FLOOD CONTROL REPORT

1988

The City of Winnipeg, Waterworks, Waste and Disposal Department is responsible for the Primary Dyking System and the flood pumping stations within the City of Winnipeg. The following report summarizes the operations of these facilities for the 1988 calendar year.

Throughout the year, all flood pumping stations were inspected once per week by the Collection Systems crews of the Waterworks, Waste and Disposal Department. All stations were checked for temperature, basement flooding and vandalism. All problems were repaired as soon as possible.

Commencing in the month of March, all stations were given a complete maintenance check to ensure that these facilities were ready for operation when required. This annual servicing includes:

i) Lubricating and operating all positive gates on sanitary, storm and combined sewers;

ii) inspection of all wet well floats;

iii) lubricating and operating of all pumps and equipment within the station;

iv) inspection of all electrical main boxes, starter boxes and motors;

v) inspection of all high voltage transformers and equipment;

vi) inspection of automated control system, where installed.

The Red River reached a peak of 8.4 feet above City Datum at James Avenue on April 9, 1988. The river quickly receded to below normal summer level by April 14 and did not reach summer level until after the closing of the Lockport gates. Under these conditions it was necessary to activate only 1 permanent flood pumping station. LaVerendrye flood pumping station was activated for the period April 7-14. During the period that the river was in flood stage, staff from the Waterworks, Waste and Disposal Department were assigned to shifts providing 24 hour coverage for all Collection System and Flood Control works.

During the months of October and November, all flood pumping stations were winterized in conjunction with the routine weekly checks. The number of flood stations which have been automated remains at sixteen.

During the months of October and November, all flood pumping stations were winterized in conjunction with the routine weekly checks. The number of flood stations which have been automated remains at sixteen.

The Waterworks, Waste and disposal Department in conjunction with the six districts of the Operations Department have continued in their efforts to upgrade the information provided in the Flood Control Manual. This information was assembled in an addendum form for use in 1988 and it is anticipated that the entire manual will be to reflect changes to the Flood Protection System completed in 1989. Due to the low flood stage experienced in 1988, no Flood Station Activity Table is included in this year's report.

Other 1988 issues pertinent to flood control include:

1.0 Extensions and Re-designations of the Primary Line of Flood Defense:

1.1 Extensions of the primary dyke (formal designation application pending) where completed in the Normand Park development (in District 5).

1.2 Easements and agreements were secured from the St. Amant Centre (District 5) in the favor of the City of Winnipeg, for that portion of the existing Primary Line of Defense which runs through their property.

1.3 Investigations and negotiations are currently underway with private holdings in St. Norbert (District 6) which may provide for the extension of the Primary Line of Defense south of Ave. St. Therese,

adding a church, school, and roughly 80 dwellings to the City's flood protection system.

1.4 Investigations providing for extension of the Primary Line of Defense north of the Bergen Cut-off (District 4) are in progress, in association with development applications on the Cut-off, and with the construction of the Kildonan Corridor Bridge embankment. A box culvert was constructed and accepted by the City at the McLeod Creek crossing, including a temporary flood pumping structure complete with flap/positive gates. The structure is designed for expansion of permanent pumping at such time as flows from a future underpass at Henderson Highway are accommodated.

1.5 Land acquisition procedures and engineering reviews were initiated along the Seine River bank which will accommodate the stabilization and reconstruction of Evans Street (District 5) for its proposed designation as Primary Line of Defense. Some 200 dwellings and several sewer overflows will be added to the City's flood protection system through this initiative.

1.6 Further to the Dyking Commissioner's January 4, 1989 letter, the Department acknowledges that requests for formal re-designation are pending on several constructed candidate primary dykes for which the Commissioner has provided is approval-in-principle, notably: St. Mary's Road/Normand Park, St. Anne's Road, Plaza Drive, River Grove Subdivision, and Riverpoint Subdivision. The Department expects to make progress on this matter in 1989.

2.0 Extreme Flood Workshop:

At its meeting of December 22nd, 1988, the board of Commissioners adopted a proposal by the Commissioner of Works and Operations that an exercise be held in 1989 to test the City of Winnipeg Peacetime Emergency Plan in response to a simulated Red River flood.

The exercise Development Committee, consisting of representatives from the Manitoba Emergency Measures Organization, Manitoba Natural Resources Branch, and the City of Winnipeg (Public Utilities, Fire, Police) is responsible for the development and implementation of the exercise in 1989.

3.0 "The Forks" Development - Primary Line of Defense:

A City approved land drainage outfall and flood pumping station was constructed. City approval was conditional on the formal re-designation of the Primary Line of Defense, including the submission of a plan identifying utilities, dyke grades, alignments, sections, easements, suitable for submission to the Dyking Commissioner for his approval, and the execution of easement agreements. The Dyking Commissioner provided his advice to the City in this regard on September 9, 1988.

Although this course of action was agreed to with The Forks' Consultant at a meeting on September 23, 1988, no further submission has been made to the City to date.

4.0 Primary Line of Defense Mapping:

The Department is continuing a project initiated in 1986 to produce plan/profile maps of the City's 70 miles of primary dykes on aerial photo bases. Over 100 - "A1" drawings at 1:2000 scale will be produced. The drawings will update plans/profiles produced by the Provincial Water Control and Conservation Branch in 1967 in a modern, revisable format. The drawings will identify deficiencies in the dyking system and areas where the dyke must be realigned to keep pace with development. Preliminary engineering requirements, will be identified to address the deficiencies and capital works will be recommended, to be funded from the Regional Flood Protection account.

5.0 The City of Winnipeg Development Agreement Parameters:

In order to reinforce and clarify the administration of developer responsibilities towards the flood protection of proposed developments, and to compliment the appropriate sections of the City of Winnipeg Act and of Manitoba Regulation 9/85 in this respect, the City is pursuing the inclusion of dyking and flood protection in it's Development Agreement Parameters.

6.0 Proposed Amendments to Flood Proofing Criteria:

The Manitoba Water Resources Branch provided the City with an opportunity to review and provide input to its proposed amendments to Manitoba Regulation 9/85, Flood Proofing Criteria.

7.0 Floodway Operations:

At a meeting held on October 12, 1988, with the Manitoba Water Resources Branch and the Assistant Deputy Minister, it was agreed that one designate each from the City and the Province would jointly review and modify as required, the operational guidelines of the Winnipeg Floodway, with a view to economically minimize flood risk within the City in the higher frequency events while respecting upstream interests, and to improve flood planning by establishing communication protocols.

PEAL/DGG/ea

1989 04 11

ROUTE		
	ACTION	INFO
WDC		
EHR		
WJB		
AHP		
GEM		
JMC		
		AGS
		DGG
FILE	TF-1	

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

TO: Mr. P. Lagasse, P. Eng.
Planning & Development Branch
Waterworks, Waste & Disposal
Department

FROM: G.K. Stewart, P. Eng.
Director of Operations

RE: DYKING COMMISSIONER'S
1988 ANNUAL REPORT

DATE: 1989 02 28

In response to your memorandum of January 25, 1989 regarding the above-mentioned subject, enclosed are the replies received from Districts 1 through 6 inclusive.

You will notice inconsistencies in the assumption of responsibility for stability of primary dykes. This requires resolution.

REP/mes
Enc.

G.K. Stewart, P. Eng.

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

TO: R. Phillips
Administrative Assistant
820 Elgin Avenue

FROM: G. A. Pekrul, C.E.T.
Supervisor of Technical
Services - District 1

FILE: FL-05a

DATE: 1989 02 08

Re: Dyking Commissioner's 1988 Annual Report

In reply to your memo of January 27, 1981, the following is the District 1 reply to the Dyking Commissioner's questionnaire:

1. a) No difficulties were encountered.

   b) Repairs were completed to the existing sewer between the River Avenue flood pumping station and the Assiniboine River by replacing the remaining section of brick sewer, reconstructing the outfall pipe, placing grouted stone rip-rap and minor slope regrading.

   c) A new land drainage sewer outfall was constructed on the Assiniboine River west of the C.N.R. main line bridge to drain the east yards site. The gate structure was under construction at years end.

   d) Parks Canada continued work on a riverbank park and walkway along the west bank of the Red River in the CNR East Yards site.

2. a) No new areas of riverbank in stability were noted during the year.

   b) Monitoring of the bank of the Red River along Churchill Drive east of Hay Avenue continued throughout the year.

   c) No riverbank works are planned by the District for the upcoming year.

3. There are no locations within District 1 that could be used as a borrow pit.

G. A. Pekrul, C.E.T.

GAP/bd

FORM 5: 86 06

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

To: R. E. Phillips
Administrative Assistant

From: Steve Winch, C.E.T.
Technical Supervisor
District #2 Operations

Re: Dyking Commissioners
1988 Annual Report

Date: February 8, 1989

The following is in reply to your memo of January 25, 1989.

1. For 1988 Calendar Year

   a) There were no problems or difficulties encountered.

   b) Maintenance work was completed on the Raquette Street and St. Charles outfalls.

   c) No new outfalls were constructed.

   d) No improvements or modifications were made.

2. Proposed Plans for Future

   No new structures, modifications to existing structures, improvements or additions to the dyking system have been proposed for this year.

3. Availability and Location of Proposed Borrow Pits

   Borrow material is available from the District 2 Landfill Site and other City property and for projects (excess material from excavations).

S. Winch, C.E.T.
Technical Supervisor,
District #2 Operations

SW/ld

FORM S: 86 06

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

To: Mr. R. E. Phillips
Administrative Assistant

From: Mr. M. J. Winkler
Technical Supervisor
District #3 Operations

Re:

Date: 1989-02-13

RE: DYKING COMMISSIONER'S 1988 ANNUAL REPORT -
FOR THE REPORTING YEAR 1988

1. Primary Dyke

a) Difficulties and problems encountered

- NIL

b) Maintenance and repairs carried out

- no major repairs conducted
- normal maintenance works carried out

c) New sewer outfall gate structures constructed

- NIL

d) Improvements and modifications carried out

- NIL

2. Proposed Plans for Future

With regard to apparent erosion and riverbank stability problems:

a) From evaluation inspections carried out in 1984 by District #3, the following outfalls remained of general concern:

Syndicate Street Outfall

- Gully in front of most southerly outfall pipe - 43" diameter; North pipe - satisfactory

Burrows Avenue Outfall

- Gully in front of outfall pipe

Jefferson Avenue Outfall

- Gully in front of outfall pipe. Rip-Rap deterioration

. . .2/

2. Proposed Plans for Future (continued)

b) Monitoring of erosion of riverbanks in critical areas:

- riverbank erosion along St. John's Park and at the end of the Burrows Avenue outfall continue to be of concern

c) The reconstruction of the Newton Avenue outfall pipe and discharge area was completed in April of 1988.

The reconstruction of the Armstrong Avenue and Polson Avenue outfalls were approved as Capital projects for construction in the winter of 1989. Private tenders for the projects were called, however the prices received exceeded the budgetary provisions and these projects have been postponed until 1990.

3. Availability and location of proposed

No change in availability and location of proposed borrow pits in 1988.

The District plans to seek additional/alternate locations for borrow pits during 1989.

M. J. Winkler
Technical Supervisor

MJW/slt

ELECTRONIC MAIL

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

TO: G. K. Stewart, P. Eng.
Director of Operations

FROM: S. Dolhun, P. Eng.
District Engineer
District No. 4 Operations

RE: File No. S-40-10-02

DATE: 1989 02 13

RE: PRIMARY DYKING SYSTEM - DISTRICT NO. 4
1988 ANNUAL REPORT

1. For the Reporting Year

a) No difficulties or problems encountered.

b) Repairs to the 2500 mm c.m.p. outfall on the Munroe Trunk Sewer were completed.

c) A new gate structure was constructed on the McLeod Creek in conjunction with the construction of the box culvert under embankment of proposed Kildonan Bridge.

A 2750 mm storm relief sewer outfall to the Red River was constructed in the vicinity of Kildonan Drive and Mossdale Avenue.

d) No other improvements or modifications carried out in 1988.

2. Proposed Plans for Future

a) The District does not evaluate river bank stability. Any suspected problems are directed to the Streets and Transportation Department.

b) Monitoring of erosion by the District is done primarily at outfalls as part of normal sewer maintenance inspections.

c) No remedial works were undertaken in 1988.

3. Availability and Location of Proposed Borrow Pits

At the end of 1987 the Northeast Landfill Site was closed and is no longer available as a source of material for raising the Primary Dyking System. However, sufficient material is available at the Ravelston Avenue Retention Pond (Transcona Low and High Storage Ponds).

"ORIGINAL SIGNED BY"
(1989 02 13/sm)

S. Dolhun, P. Eng.

BT/sm

ELECTRONIC MAIL

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

TO: MR. R.E. PHILLIPS,
Administrative Assistant,
Operations Department.

FROM: MR. G. SEARS, C.E.T.,
Technical Supervisor,
District #5.

DATE: 1989 02 17

RE: QUESTIONNAIRE FOR THE ANNUAL REPORT ON THE PRIMARY DYKING SYSTEM WITHIN THE CITY OF WINNIPEG, DISTRICT #5

As requested, we are submitting our annual report on the Primary Dyking System for District #5.

"Original Signed by:"
MR. G.E. SEARS, C.E.T.,
Technical Supervisor,
District #5.

GES/ll

Encl.

PRIMARY DYKING SYSTEM QUESTIONNAIRE
- DISTRICT #5 -

I. **FOR THE 1988 CALENDAR YEAR:**

Item (a): No difficulties or problems were encountered in 1988.

Item (b): ii) All culverts were inspected within the dyking system.

Item (c): i) A control gate structure was constructed on a relief sewer overflow at Kingston Row at the St. Vital Bridge.

Item (d): i) The Primary Dyking System for Normand Park was extended Southerly in 1988 (Redview Drive Extension).

II. **PROPOSED PLANS FOR FUTURE:**

Item (a): Evaluation of Riverbank Stability in Critical Areas:

i) Acquisition of Property on Evans Street at the Seine River (discussions continuing).

ii) Repairs to the outfall piping and minor rip-rapping of bank toe will be undertaken in 1989 for the Dumoulin outfall.

Item (b): A study is underway to monitor the bank stability and erosion problems associated with the Snow Dump at Lyndale Drive.

Item (c): Remedial works were completed on the Fernwood & Kenwood outfalls in 1988.

III. **AVAILABILITY AND LOCATION OF PROPOSED BORROW PITS:**
Proposed borrow pits are at the following locations:

. Whittier Park (area North of C.N.R. Highline)
. Provencher Boulevard East of Dawson Road (nominal)
. River Road opposite exit from St. Vital Park (nominal)
. St. Vital South Regional Park - East of Sandrington
. South End Sewage Treatment Plant

FORM 5: 86 06

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

To: Mr. R. E. Phillips
Administrative Assistant
Operations Department
820 Elgin Avenue

From: C. D. Torpey, P. Eng.
A/Assistant District Engineer
District 6, Operations

Re:

Date: 1989 02 13

Re: PRIMARY DYKING SYSTEM WITHIN THECITY OF WINNIPEG -
DYKING COMMISSIONER'S 1988 ANNUAL REPORT

As requested, we submit our annual report on the primary dyking system within District 6.

I. FOR THE CALENDAR YEAR ENDING DECEMBER 31, 1988:

a) No problems or difficulties were encountered.

b) Normal maintenance and repairs were carried out.

c) No new sewer outfall gate structures were constructed.

d) Major repair work has been completed on the Somerset Avenue outfall and Riviera Avenue outfall. Installation of the liner in the Harstone outfall has been completed.

II. PROPOSED PLANS FOR THE FUTURE:

a) Major repair work will be carried out on the following outfalls - Kilkenny Drive outfall and Dowker Avenue outfall and Riverwood Netley outfall. Work on these outfalls will be completed before the spring of 1989.

b) An evaluation study in connection with the "Primary Dyking System" specifically the location of the primary dyke, is presently underway by this District.

c) No evaluations of riverbank stability in critical areas are planned by the District. Evaluation may, however, be undertaken by private interest groups in connection with proposed developments.

d) No remedial works on riverbanks were undertaken by the District in 1988. The District is not carrying out any program of monitoring erosion along the riverbanks, but will advise the Streets & Transportation Department if an erosion problem is discovered.

III. AVAILABILITY AND LOCATION OF PROPOSED BORROW PITS:

Following is a list of borrow pit areas which, with the exception of the area described in (1), lie inside the primary dyking system and should be accessible at river levels reached in 1950. Actual quantities of borrow pits are not known; however, sites are sufficiently large that adequate material should be available:

1) Northeast corner of Oakenwald Avenue and North Drive;

2) Park area adjacent to South Drive between Kebir Place and Holly Avenue;

3) Oakenwald School grounds - westerly extremity of Manchester Boulevard North and South;

4) River Lots 17 and 18 east of Waverley Street and north of Lot 16 Drain;

5) Waverley Street from De Vos Road to Bison Drive -- large open tracts of land on either side of Waverley Street.

C. D. Torpey, P. Eng.

HH/ah

FORM 5: 86 06

THE CITY OF WINNIPEG

INTER-OFFICE MEMORANDUM

To:	P. Lagasse, P. Eng. Waterworks, Waste & Disposal Dept.	From:	G. A. Knoll, P. Eng. Streets Engineer Streets & Transportation
Re:	Our File: SG-11	Date:	1989 02 01

RE: DYKING COMMISSIONER'S 1988 ANNUAL REPORT

The Streets and Transportation Department undertook remedial riverbank erosion/stability works at the following locations in 1988:

RF-1

1. Granite Curling Club on the Assiniboine River - riverbank stabilization works completed, monitoring equipment installed.

2. Dominion Street End on the Assiniboine River - replacement of riverbank retaining wall completed.

3. Stephen Juba Park and Alexander Dock Area on the Red River - emergency regrading works undertaken, monitoring equipment installed.

4. King's Park on the Red River - geotechnical report prepared, riverbank stabilization works not warranted at this time.

GAK/cjk

THE UNIVERSITY OF MANITOBA

OFFICE OF THE PRESIDENT

Winnipeg, Manitoba
Canada R3T 2N2

January 19, 1989

File: 11.1.5

Mr. F. Penner, P.Eng.
Dyking Commissioner
Water Resources Branch
1577 Dublin Avenue
Winnipeg, Manitoba
R3E 3J5

Dear Mr. Penner:

Subject: Dyking Commissioner's 1988 Annual Report

The following is in response to the Questionnaire for the Annual Report on the Primary Dyking System Within the City of Winnipeg:

1. 1988 Calendar Year

   a) Difficulties and problems encountered: None

   b) Maintenance and repairs carried out: Routine only, valve, bearings and all electric motors were checked at our storm sewer pumping station for satisfactory operation.

   c) New Sewer Outfall Gate Structures constructed: None

   d) Improvements and modifications carried out: None

2. Proposed Plans for the Future: None.

   Bank Stability:

   At present, no evaluation studies are under way in connection with the "Primary Dyking" system.

   Bank slippage in the southerly area had been reviewed at several intervals throughout 1988 and normal lateral movement of less than 5 centimeters was observed.

Fifteen river bank location check points have been established, which will be monitored by University of Manitoba Physical Plant staff during 1989.

The bank adjacent to the Wallace Building (Geological Sciences) site was monitored throughout 1988, by University of Manitoba Physical Plant staff, which will be continued on a regular basis. Bank slippage of less than 3 cm was detected.

3) Availability and Location of Proposed Borrow Pits:

No changes are suggested in the availability or location of proposed borrow pit for 1989.

Yours sincerely,

W. R. Wall
Associate Vice President
(Administration)

wrw/nl

cc: Mr. T. G. Falconer, Vice President (Administration)
Mr. H. Frank, Director of Physical Plant